

REMARKS

Claims 1-21 are pending. No new matter has been added by way of the present amendment. For instance, claim 1 has been amended to recite the limitation that "the layers formed on the image-forming layer side of the support do not substantially contain ammonia" as supported by the present specification at page 34, lines 11-16. Accordingly, no new matter has been added.

In view of the following remarks Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Objection to the Specification

At page 2 of the outstanding Office Action the Examiner asserts that the application is objected to because of the alterations which have not been initialed and/or dated. Applicants traverse and submit that a properly executed Declaration/Power of Attorney is being concurrently submitted herewith. Reconsideration and withdrawal of this rejection are requested.

Issues Under 35 U.S.C. §102(b)/103(a)

The Examiner has rejected claims 1 and 9-14 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over either JP 2000-10233 (which is

equivalent to United States Patent Number 6,165,707 issued to Hirano) or Inoue et al. ('022).

The Examiner has also rejected claims 1 and 4-15 under 35 U.S.C. §102(b) as being anticipated by JP '072.

The Examiner has also rejected claims 1-16 and 18-20 under 35 U.S.C. §103(a) as being obvious over JP '072.

Lastly, the Examiner has rejected claim 17 under 35 U.S.C. §103(a) as being obvious over JP '072 in view of Ito et al.

Applicants respectfully traverse each of the above rejections.

Applicants hereby incorporate all arguments previously made.

Distinctions Between the Present Invention and the Cited Art

Applicants respectfully submit that none of the references cited by the Examiner suggest, or disclose condition (I) or condition (II) as required by the present claims. Applicants have previously submitted a Declaration on November 22, 2002. The Examiner asserts that this Declaration is unpersuasive. However, Applicants submit that the Declaration is persuasive and request that the Examiner consider the following.

The Nakano Declaration shows that LACSTAR 3307B contains 650 µg/1g of NH_4^+ .

The materials specifically disclosed in Hirano et al. ('707), Inoue et al. ('022) and JP '072 have an emulsion layer which was prepared by applying a coating solution containing 406

or 470 g of LACSTAR 3307B per a mole (108 g) of Ag in a silver coating amount of 1.6 or 1.7 g/m² (see column 83 and column 86 in Hirano et al., column 43 and column 45 in Inoue et al. and column 0267 and column 0280 in JP '072).

The amount of LACSTAR 3307B in the emulsion layers of materials disclosed in the references is about 7 g/m² (=470 or 406/108 x 1.6 or 1.7), and the amount of NH₄⁺ in the emulsion layers is about 0.25 mmol/m² (=7 g/m² x 650 µg/lg x 1/18). Therefore, it is clear that the material disclosed in Hirano et al. ('707), Inoue et al. ('022) or JP '072 contains the NH₄⁺ outside the scope of the claimed invention which requires in Condition I that the NH₄⁺ content in all the layers formed on the image-forming layer side of the support be 0.06 mmol/m² or less.

The material containing 0.25 mmol/m² of NH₄⁺ is similar to the sample No. 1-3 or No. 1-8 containing 0.20 mmol/m² of NH₄⁺ shown in Table 1 in the present specification. As shown in the Table 1, claimed invention shows much lower temperature and humidity dependency than samples No. 1-3 and No. 1-8. Applicants submit that one skilled in the art could not have expected that such excellent effects could be obtained by satisfying Condition I of the claimed invention.

Hirano et al. ('707), Inoue et al. ('022) and JP '072 are silent of the content of NH₄⁺. JP '072 suggests that ammonia would be rather desirable for pH modifier (See column 0100 of JP

'072). This prevents anyone skilled in the art from conceiving of materials which satisfy Condition I.

Concerning Condition II, Applicants submit that the materials disclosed in Hirano et al. ('707), Inoue et al. ('022) and JP '072 contain LACSTAR 3307B as binder, thereby substantially containing ammonia. As shown in Table 2, the claimed invention shows much lower temperature and humidity dependency than comparative samples that do not satisfy Condition II. Applicants submit that one skilled in the art could not have expected that such excellent effects could be obtained by satisfying Condition II of claimed invention.

Hirano et al. ('707), Inoue et al. ('022) and JP '072 are silent as to the film surface pH being substantially unchanged and the layers formed on the image-forming layer side of the support not substantially containing ammonia as required by Condition II. In fact, JP '072 suggests that ammonia would be rather desirable for pH modifier (See column 0100 in JP '072). This prevents those skilled in the art from conceiving of materials which satisfy Condition II.

In view of the above, Applicants respectfully submit that the present claims define subject matter which is patentable over the cited art. Accordingly, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.


If the Examiner has any questions or comments, please do not hesitate to contact the undersigned at the offices of Birch, Stewart, Kolasch & Birch, LLP.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one month extension of time for filing a reply in connection with the present application, and the required fee of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

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Attachment: Version with Markings to Show Changes Made



Application No. 09/928,339

VERSION WITH MARKINGS TO SHOW CHANGES MADE

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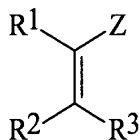
IN THE CLAIMS

Claim 1 has been amended as follows:

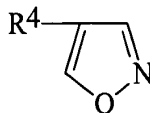
Claim 1. (Twice Amended) A photothermographic material having, on a support, at least an image-forming layer containing a non-photosensitive silver salt, a photosensitive silver halide and a binder and a protective layer outer than the image-forming layer on the support, and the photothermographic material satisfies at least one of the following Conditions I and II:

Condition I

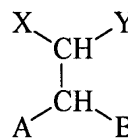
at least one of the layers formed on the image-forming layer side of the support contains at least one compound selected from compounds represented by the following formula (1), (2) or (3), and the NH_4^+ content in all the layers formed on the image-forming layer side of the support is 0.06 mmol/m^2 or less:



(1)



(2)



(3)

wherein:

in the formula (1), R^1 , R^2 and R^3 each independently represents a hydrogen atom or a substituent, Z represents an

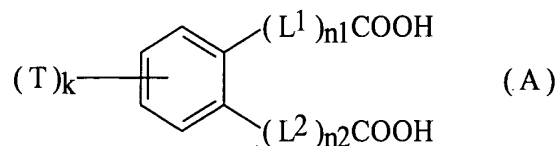
electron-withdrawing group, and R^1 and Z , R^2 and R^3 , R^1 and R^2 , or R^3 and Z may be combined with each other to form a ring structure,

in the formula (2), R^4 represents a substituent,

in the formula (3), X and Y each independently represents a hydrogen atom or a substituent, A and B each independently represents an alkoxy group, an alkylthio group, an alkylamino group, an aryloxy group, an arylthio group, an anilino group, a heterocyclyloxy group, a heterocyclylthio group or a heterocyclylamino group, and X and Y or A and B may be combined with each other to form a ring structure:

Condition II

at least one of the layers formed on the image-forming layer side of the support contains a nucleating agent, and at least one of the layers formed on the image-forming layer side of the support contains at least one compound represented by the following formula (A), and film surface pH of the image-forming layer side of the support is substantially unchanged after coating, and the layers formed on the image-forming layer side of the support do not substantially contain ammonia:



wherein:

in the formula (A), T represents a monovalent substituent, k represents an integer of 0-4; when k is 2 or more, two or more of T may be the same or different from each other or one another and may be bonded together to form a ring; L^1 and L^2 each independently represents a bridging group; and n1 and n2 each independently represents an integer of 0-30.